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SILURIAN FOSSILS FROM ARISAIG, NOVA SCOTIA—AMI. 185

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VII.—CATALOGUE OF SILURIAN FOSSILS FROM ARISAIG, NOVA SCOTIA. BY HENRY M. AMI, M.A., F.G.S.

(Read April 11th, 1892.)

Through the palæontological writings of Salter, Billings, Dawson, Honeyman, Hall and Jones—the fauna of the Silurian rocks of Arisaig have been made widely known and notable both on account of the abundance and variety of its forms, as well as on account of the remarkable continuity and unbroken sequence of the strata from which these organic remains have been obtained.

In the Quarterly Journal of the Geological Society of London, in the Canadian Naturalist, and Nova Scotian Institute of Natural Science Transactions, as well as in the Reports of the Geological Survey of Canada, the above-mentioned authors have described and recorded numerous new, interesting and previously unknown forms.

During the season of 1886, Mr. T. C. Weston, accompanied by Mr. J. A. Robert, made important collections of fossils in the rocks constituting the stratigraphical series at Arisaig, along the coast, in connection with the geological work entrusted by Dr. Selwyn to Mr. Hugh Fletcher, and amongst them were several new and hitherto unrecorded forms, besides good examples of species which had been previously considered or doubtfully identified.

These collections, as well as others from Nova Scotia, having been placed in my hands for determination during the season of 1886-87, I have applied myself to identify the various forms present.

Amongst the Arisaig collections alone I have been able to recognise no less than 163 species, which are divisible into groups as follows:—

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	No. of Species.
Plantæ.....	3
Rhabdophora.....	6
Polypi.....	3
Brachiopoda	44
Lamellibranchiata.....	59
Pteropoda	8
Gasteropoda.....	9
Cephalopoda	13
Vermes.....	4
Ostracoda.....	7
Trilobita.....	6
Merostomata.....	1
Total.....	163

The species included in the above enumeration are all Silurian (Upper Silurian), and represent horizons from the base of that epoch to its summit, which, according to the New York and Ontario system and equivalencies, would indicate from the *Medina* to the *Lower Helderberg*, both inclusive, and according to British nomenclature, include from the Llandovery to the upper members of the Ludlow.

It is but natural to point out here that, in examining the fauna of these Arisaig rocks, I have found a most intimate relation existing between it and the fauna of rocks assigned to a similar horizon in Europe along the Atlantic border.

In fact, the intimacy may be said to be much closer between the Arisaig fossils and those, for instance, of the Ludlow rocks of Kendal, in Westmoreland, England, than with either the Silurian rocks of Anticosti, of Ontario or of New York State.

The following is a classified list of the organic remains collected by Mr. T. C. Weston in 1886 in Divisions A, B, B', C and D of the Arisaig Section, according to the late Rev. Dr. Honeyman and Mr. Hugh Fletcher, B. A.

It is hoped to supplement this catalogue shortly with full descriptions of the new forms herein mentioned, and notes on other interesting species, which are but little known or previously unrecorded

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ANABAA TO

SILURIAN FOSSILS FROM ARISAIG, NOVA SCOTIA.

LIST OF SPECIES.

PLANTÆ.

1. *Palæophycus* sp.
2. *Psilophyton* (?) sp.
3. Obscure fucoidal remains, uncertain.

RHABDOPHORA.

4. *Monograptus Clintonensis*, Hall.
5. " *Halli*, Barrande.
6. " *Riccartonensis*, Lapworth
7. " *Sandersoni* (?) Lapworth.
8. " sp. indt.
9. " (?) sp. (?)

POLYPI.

10. *Cladopora seriata*, Hall.
11. *Streptelasma patula*, Rominger.
12. " sp. nov.

BRACHIOPODA.

13. *Lingula spathata*, Hall.
14. " *rectilatera*, Hall.
15. " *lamellata?* Hall.
16. " *oblonga*, Conrad.
17. " sp. indt.
18. *Leptobolus* sp.
19. *Discina tenuilamellata*, Hall.
20. " " v. *subplana*, Hall.
21. " *Vanuxemi*, Hall.
22. " sp.
23. *Pholidops implicata*, Sowerby.
24. *Chonetes Nova-Scotica*, Hall.
25. " *tenuistriata*, Hall.

26.	<i>Orthis elegantula</i> , Dalman.	61.
27.	" <i>hybrida</i> ? Sowerby.	62.
28.	" <i>subcarinata</i> , Hall.	63.
29.	" <i>n. sp.</i>	64.
30.	" <i>polygramma</i> , Sowerby.	65.
31.	" <i>rustica</i> , Sowerby.	66.
32.	" <i>sp. indt.</i>	67.
33.	<i>Platystrophia biforata</i> , v. <i>lynx</i> , Eichwald.	68.
34.	<i>Skenidium pyramidale</i> , Hall.	69.
35.	<i>Strophomena euglypha</i> ? Sowerby.	70.
36.	" <i>rhomboidalis</i> , Wilekens.	71.
37.	" <i>expansa</i> , Sowerby.	72.
38.	" <i>corrugata</i> ? Conrad.	73.
39.	" <i>subplana</i> , Hall.	74.
40.	" <i>varistriata</i> , v. <i>arata</i> , Hall	75.
41.	<i>Spirifer crispus</i> ? Hisniger.	76.
42.	" <i>rugæcostus</i> , Hall.	77.
43.	" <i>subsulcatus</i> , Hall.	78.
44.	<i>Atrypa reticularis</i> , Linnæus.	79.
45.	" <i>sp.</i>	80.
46.	<i>Rhynchonella æquiradiata</i> , Hall.	81.
47.	" <i>emacerata</i> , Hall.	82.
48.	" <i>formosa</i> , Hall.	
49.	" <i>neglecta</i> , Hall.	83.
50.	" <i>sinuata</i> , Hall.	84.
51.	" <i>Saffordi</i> , Hall.	85.
52.	" <i>sp. indt.</i>	86.
53.	<i>Pentamerus Knighti</i> , Sowerby.	87.
54.	(?) <i>sp.</i>	88.
55.	<i>Leptocœlia hemispherica</i> , Sowerby.	89.
56.	" <i>intermedia</i> , Hall.	90.

LAMELLIBRANCHIATA.

57.	<i>Orthonota curta</i> , Hall.	93.
58.	" <i>incerta</i> , Billings.	94.
59.	" <i>simulans</i> ? Billings.	95.
60.	" <i>n. sp.</i>	96.

61. *Orthonota* sp. indt.
62. ?*Leptodomus truncatus*, McCoy.
63. *Sanguinolites anguliferus*, McCoy.
64. " *carinatus*, McCoy (sp.).
65. *Grammysia Acadica*, Billings.
66. " *cingulata*, Hisinger.
67. " " var *triangulata*, Salter.
68. " *remota*, Billings.
69. *Goniophora bellula*, Billings.
70. " *transiens*, Billings.
71. " *N. sp.*
72. " sp. indt.
73. *Cleidophorus erectus*, Hall.
74. " *concentricus*, Hall.
75. " *cuneatus*, Hall.
76. " *nuculiformis*, Hall.
77. " *semiradiatus*, Hall.
78. " *subovatus*, Hall.
79. " sp. allied to *C. subovatus*, H.
80. *Anodontopsis angustifrons*, McCoy.
81. " ? *N. sp.*
82. *Cucullella elongata*, Hall, sp.
(= *Cleidophorus elongatus*, H.)
83. *Cucullella N. sp. No. 1.*
84. " *N. sp. No. 2.*
85. *Cytherodon ? placidus*, Billings.
86. " *socialis*, Billings.
87. " *N. sp.*
88. *Ctenodonta angusta*, Hall sp.
89. " " n. var. or n. sp.
90. " *attenuata*, Hall sp.
91. " n. sp.
92. " *equilatera*, Hall sp.
93. " *elliptica*, Hall.
94. " sp. indt.
95. *Megambonia cancellata*, Hall.
96. " *hians ?* McCoy.

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97.	<i>Megambonia striata</i> , Hall.	129.
98.	<i>Modiolopsis exilis</i> , Billings.	130.
99.	“ <i>rhomboidea</i> , Hall.	131.
100.	<i>Ambonychia</i> ? n. sp.	132.
101.	<i>Posidonomya</i> , sp. indt.	
102.	<i>Posidonia alata</i> , Hall.	
103.	<i>Pterinotella curta</i> , Billings.	
104.	“ <i>venusta</i> , Hall.	133.
105.	“ n. sp.	134.
106.	<i>Pterinea emacerata</i> , Conrad.	135.
107.	“ <i>Honeymani</i> , Hall sp.	136.
108.	“ <i>limiformis</i> , Hall.	137.
109.	“ <i>mantacula</i> , Hall.	138.
110.	“ <i>orbiculata</i> , Hall.	139.
111.	“ <i>textilis</i> , Hall.	140.
112.	“ sp. nov.	141.
113.	“ sp. nov. (?)	142.
114.	“ sp. indt.	143.
115.	“ <i>asperula</i> , McCoy.	144.
		145.

PTERAPODA.

116.	<i>Conularia Niagarensis</i> , Hall.	
117.	<i>Tentaculites distans</i> , Hall.	146.
118.	“ <i>elongatus</i> , Hall.	147.
119.	“ <i>minutus</i> , Hall.	148.
120.	“ <i>Niagarensis</i> , Hall.	149.
121.	“ n. sp.	
122.	“ sp. indt	
123.	<i>Theca</i> n. sp.	150.

GASTEROPODA.

124.	<i>Pleurotomaria Halei</i> ? Hall.	151.
125.	“ sp.	152.
126.	<i>Murchisonia Arisaigensis</i> , Hall.	153.
127.	“ <i>subulata</i> , Conrad.	154.
128.	“ cf. <i>M. Conradi</i> , Hall.	155.
		156.

- 129. *Cyclonema cancellatum*, Hall.
- 130. " *obsoletum* ? Hall.
- 131. " *n. sp.*, No. 1.
- 132. " *n. sp.*, No. 2.

CEPHALOPODA.

- 133. ? *Discosurus conoideus*, Hall.
- 134. *Cyrtoceras* ? sp.
- 135. *Orthoceras elegantulum*, Dawson.
- 136. " *longicameratum* ? Hall.
- 137. " *exornatum*, Dawson.
- 138. " *punctostriatum*, Hall.
- 139. " *virgatum* ? Sowerby.
- 140. " *rigidum* ? Hall.
- 141. " *sp.* No. 1.
- 142. " *sp.* No. 2.
- 143. " *sp.* No. 3.
- 144. " *sp.* No. 4.
- 145. *Oncoceras* sp.

VERMES.

- 146. *Conchicholites* sp.
- 147. *Cornulites flexuosus*, Hall.
- 148. " " *v. gracilis*, Hall.
- 149. *Serpulites dispar*, Salter

OSTRACODA.

- 150. *Primitia mundula*, Jones.
- 151. " *ovata* ? Jones and Hall.
- 152. *Beyrichia æquilatera*, Hall.
- 153. " *tuberculata*, Kløden.
- 154. " " *v. pustulosa*, Hall.
- 155. " " *v. strictispiralis*, Jones.
- 156. " " *v. Næetlingi*, Reuter.

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TRILOBITA.

- 157. *Calymene Blumenbachi*, Brongniart.
- 158. *Homalonotus* sp.
- 159. " *Dawsoni*, Hall.
- 160. *Phacops* ? sp.
- 161. *Dalmania Logani*, Hall.
- 162. *Acidaspis tuberculatus* ? Conrad.

MEROSTOMATA.

- 163. *Stylonurus* ? sp. nov.

OTTAWA, March 7th, 1892.